

Work Order ID 119159

May-12-14 9:49:29 AM

slip 22/05

119159

Page 1

Item ID: D350-591-113 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Heli-Access Step, Short, High Skid Gear Compatible
 Start Date: 5/12/14 Start Qty: 2.00 *2* Cust Item ID:
 Required Date: 5/12/14 Req'd Qty: 2.00 *2* Customer:
 Reference:

Approvals: Process Plan: u Date: Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2310	D								
DSI 9525	A								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP D350-591-113								
110	Large Fab	0.00							
110	Large Fab								
Large Fab	Memo	0.00							
	1-Cut D2244 extrusion to 62.00" long as per Dwg D2310								
	2-Drill extrusion as per Dwg D2310 using drill Jig DT8230								
	3-Deburr								

DAS
31
9-89

ML5 14-05-22
②

2x 14-05-22

2 14-05-13

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Quality Control

2x 14.5.13

24 of 14.05.20

② 14-05-20 DAS
9
9-00

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Item ID: D350-591-113

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Heli-Access Step, Short, High Skid Gear Compatible

Start Date: 5/12/14 Start Qty: 2.00 *2*

Cust Item ID:

Required Date: 5/12/14 Req'd Qty: 2.00 *2*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							
150									
QC	Memo	0.00				②	14-05-20	DAS 9 9.89	
Quality Control									
160	Chemical Conversion Coat per QSI005 4.1	0.00							
160									
HandFinish	Memo	0.00				②	14-05-20	DMC	
Hand Finishing									
170	Large Fab	0.00							
170									
Large Fab	Memo	0.00				②	14-05-21	DMC/PO	
Large Fab	1-Rivet as per Dwg D2310 2-Inspect for foreign object as per QSI 024 3-Weld Aft end cap as per Dwg D2310 A/R AL ROD Batch: <u>1128956</u> 4-Grind end cap welds flush								

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 Start Date: 5/12/14 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 5/12/14 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00							
190 *190* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
200 *200* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00				2		7/6/15/21	

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 Required Date: 5/12/14 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
210	<i>M128909</i>					<i>2</i>	<i>0</i>	<i>4521</i>	<i>DAS 34 989</i>
Powdercoat	Memo	0.00							
Powder Coating	START TIME: <i>1:25</i> OVEN TEMPERATURE: <i>325°</i> FINISH TIME: <i>1:55</i>								
220	Wing Walk as per dwg QSI005 4.4 Batch <i>M128909</i>	0.00							
220									
HandFinish	Memo	0.00							
Hand Finishing									
230	QC3- Inspect Part Finish	0.00							
230									
QC	Memo	0.00							
Quality Control									

DAS
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9-89

14/5/22

2

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Required Date: 5/12/14 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	Pick Kit	0.00							
240									
Packaging	Memo	0.00		DAS					
Packaging				06					
				9-89					
250	QC4- 100% Inspect kits for completeness	0.00							
250									
QC	Memo	0.00		DAS					
Quality Control				31					
				9-89					
260	PACKAGING RESOURCE #1	0.00							
260									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D350-591-113								
	Locations <u>76-861</u>								

2 14-05-22

2 MAY 22 2014

2 MAY 22 2014

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 Required Date: 5/12/14 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270	QC21- Final Inspection - Work Order Release	0.00							
270									
QC	Memo	0.00							
Quality Control									

MCS 14-05-22
MF 14-5-22

Picklist Print

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Work Order ID: 119159

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Parent Item: D350-591-113

D350-591-113

Parent Item Name: Heli-Access Step, Short, High Skid Gear Compatible

Start Date: 5/12/14

Required Date: 5/12/14

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:H04.11.09ReformatKJ/JLM
ECN10-586 10.06.18 DD verf:EC

IPP Rev:E as per

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2244-116		Manufactured	No			110	Each	41.5000	1	2			
D2244-116									**				
STEP EXTRUSION													

Location	Loc Qty	Loc Code
WA003	41.4999632	
60307	9	
80803	24	
89954	8.5	

D2275		Manufactured	No			130	Each	75.0000	1	2			
D2275									**				
Bushing													

Location	Loc Qty	Loc Code
WA003	75	
103631	18	
107673	37	
108945	20	

D2582		Manufactured	No			170	Each	10.0000	1	2			
D2582									**				
Hi-Skid Step Leg Ass'Y													

Location	Loc Qty	Loc Code
WA003	10	
106091	2	
111490	8	

Picklist Print

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Parent Item: D350-591-113

D350-591-113

Parent Item Name: Heli-Access Step, Short, High Skid Gear Compatible

Start Date: 5/12/14

Required Date: 5/12/14

Start Qty: 2.00

Required Qty: 2.00

D2673-34

Manufactured No

130

Each

65.0000

2

4

D2673-34

End Plate

114.05.20

Location

Loc Qty

Loc Code

WA003

65

109579

2

117775

63

K591-113

Manufactured No

240

Each

0.0000

1

K591-113

Short Step Instln

DAS

31

119160

68-5

90

DAS

MS20600-AD4W3

~~9-99~~

Purchased

No

170

Each

531.0000

16

32

MS20600-AD4W3

Cherry Rivets

DMC 14-5-21

Location

Loc Qty

Loc Code

ST311

162

122151

82

m127476

80

WA003

369

107939

369

36x

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Shop Packet Print

Page 2



DESIGN KE	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2310	REV. D. SHEET 1 OF 2
DATE 05.11.14		TITLE HIGH SHORT STEP ASSEMBLY	SCALE NTS
A	94.11.10	NEW ISSUE	
B	97.05.22	END CAPS CHANGED	
C	97.07.23	ADDED BUSHING AND FACING INFO	
D	05.11.14	UPDATE FINISHING NOTE	

D2310 HIGH SHORT STEP ASSEMBLY PARTS LIST

Part No.	Description	QTY
D2310	High Short Step Assembly	X
D2244-62.0	STEP EXTRUSION*	1
D2275	BUSHING	1
D2582	STEP LEG ASSEMBLY	1
D2673-34	STEP END PLATE	2
MS20600AD4W3	Rivets	16 *

*cut per drawing

651211 07/09

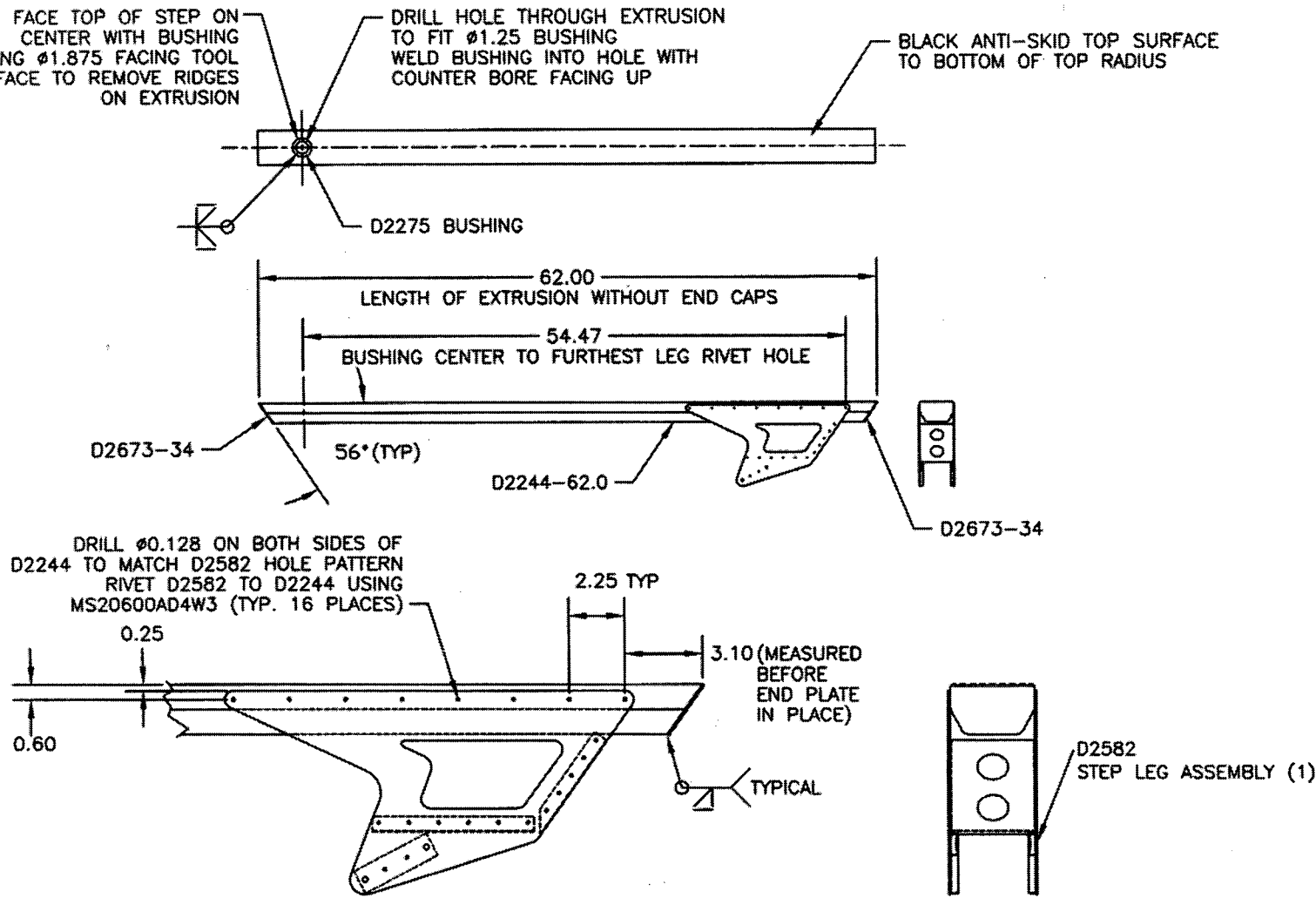
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DATE	05.11.14	DRAWING NO.	D2310	REV. D
		TITLE	HIGH SHORT STEP ASSEMBLY	SHEET 2 OF 2
		SCALE	NTS	



STEP LEG DETAIL

- D2310 HIGH SHORT STEP ASSEMBLY**
- 1) MAKE FROM D2244 STEP EXTRUSION
 - 2) WELD PER DART QSI 004
 - 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
 - 4) ALL DIMENSIONS ARE IN INCHES
 - 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

RELEASED
05.11.28

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DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-591 REV. G
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-591 REV. 3
REF TCCA STC: SH92-6
REF FAA STC: SH967NE

PURPOSE:

TO PROVIDE AN OPTIONAL CUSHION KIT TO BE INSTALLED ON THE D350-591-111A/-113/-115/-117A/-119 *Heli-Access-Step™* (THE D2856-400-720 ABRASION STRIP IS REPLACED WITH THE D3595-200-300 CUSHION).

CHANGE:

FOR D350-591-111A/-113/-115 @ CHG 005 (OR LATER), D350-591-117A @ CHG 003 (OR LATER) AND D350-591-119 @ CHG 004 (OR LATER), THE PARTS LIST OF INSTALLATION INSTRUCTIONS D350-591 AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-591 IS AMENDED AS FOLLOWS:

QTY -111A	QTY -113	QTY -115	QTY -117A	QTY -119	Part Number	Description
X					D350-591-111A	Heli-Access-Step™, Long Step – High Skid
	X				D350-591-113	Heli-Access-Step™, Short Step – High Skid
		X			D350-591-115	Heli-Access-Step™, Short Step – Low Skid
			X		D350-591-117A	Heli-Access-Step™, Pre-Flight Step
				X	D350-591-119	Heli-Access-Step™, Long Step – Low Skid
	1				D2310	STEP ASSEMBLY (HIGH-SHORT)
1					D2311	STEP ASSEMBLY (HIGH-LONG)
		1			D2354	STEP ASSEMBLY (LOW-SHORT)
				1	D2355	STEP ASSEMBLY (LOW-LONG)
4	2	2	2	2	D2171	CLAMP
4	2	2	2	2	D2182B035	CUSHION
8	4	4	4	4	D2274	RADIUS BLOCK
			1		D2362-041	SUPPORT BRACKET
2	1			1	D2362-3	SUPPORT BRACKET
		1			D2362-5	SUPPORT BRACKET
2	1	1	1	1	D3595-200-300	CUSHION (NEW)
2	2	2		2	AN3-37A	BOLT
		4			AN4-20A	BOLT (REPLACED, WAS AN4-16A)
8	4			4	AN4-21A	BOLT (REPLACED, WAS AN4-20A)
1	1	1	4	1	AN4-22A	BOLT
4	4	4		4	NAS1149D0363J	WASHER (OR AN960JD10)
10	6	2	4	6	NAS1149D0463J	WASHER (OR AN960JD416)
		4			NAS1149D0416J	WASHER (OR AN960JD416L)
2	2	2		2	MS21042L3	NUT
9	5	5	4	5	MS21042L4	NUT

40119659

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01
APPROVED BY: D. SHEPHERD (DE # 02)
DATE: 10.06.08
CERT. NO.: SH92-6
ISSUE NO.: 11

A	NEW ISSUE.	JPH	10.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9525	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		STEP CUSHION CHANGE	NTS
DATE 10.06.08		<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

THE DSI-9525-XXX KITS THAT ARE AVAILABLE FROM DART TO UPGRADE THE D350-591-111A/-113/-115 KITS @ CHG 004 (OR EARLIER), THE D350-591-117A KIT @ CHG 002 (OR EARLIER) AND THE D350-591-119 KIT @ CHG 003 (OR EARLIER) ARE AS FOLLOWS:

QTY -011	QTY -013	QTY -015	QTY -017	Part Number	Description
X				DSI-9525-011	STEP CUSHION KIT (FOR D350-591-111A)
	X			DSI-9525-013	STEP CUSHION KIT (FOR D350-591-113/-119)
		X		DSI-9525-015	STEP CUSHION KIT (FOR D350-591-115)
			X	DSI-9525-017	STEP CUSHION KIT (FOR D350-591-117A)
2	1	1	1	D3595-200-300	CUSHION
		4		AN4-20A	BOLT
8	4			AN4-21A	BOLT
			4	AN4-22A	BOLT
8	4	4	4	NAS1149D0463J	WASHER (OR AN960JD416)
8	4	4	4	MS21042L4	NUT

INSTRUCTIONS:

TO INSTALL THE D3595-200-300 CUSHION:

1. REMOVE THE STEP PER ICA-D350-591 SECTION 32.2
2. REMOVE THE D2856-400-720 ABRASION STRIP PER ICA-D350-591 SECTION 32.4
3. POSITION THE D3595-200-300 CUSHION AS INDICATED ON SHEET 3 OR 4 (AS APPLICABLE) OF THIS SERVICE INSTRUCTION.
4. REINSTALL THE STEP PER ICA-D350-591 SECTION 32.1 AS APPLICABLE USING THE NEW HARDWARE PROVIDED AS SHOWN ON SHEET 3 OR 4 (AS APPLICABLE) OF THIS SERVICE INSTRUCTION.






WEIGHT AND BALANCE:

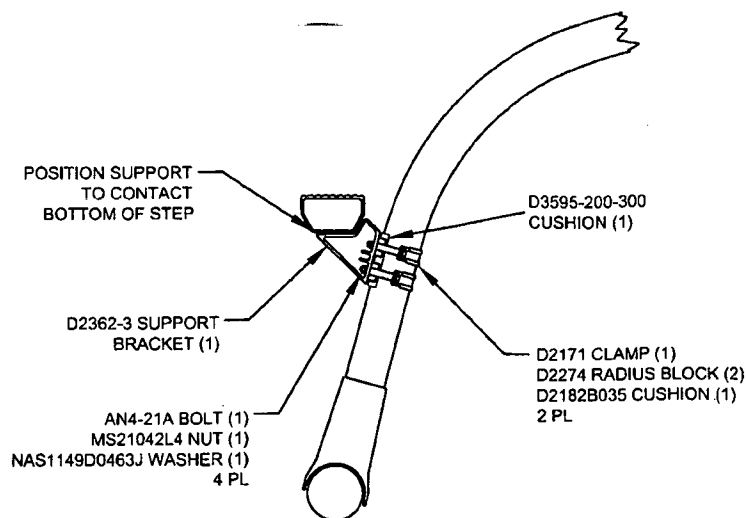
THERE IS A NEGLIGIBLE WEIGHT INCREASE WITH THIS MODIFICATION.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

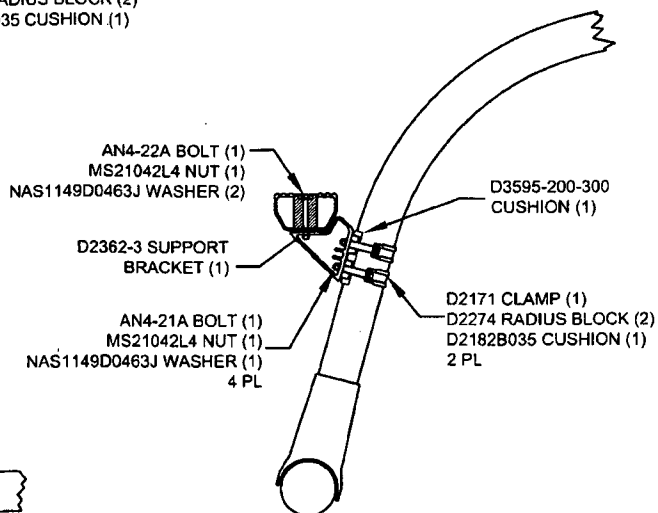
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BY: 
D. SHEPHERD (DE # 02)

DATE: 10.06.08
CERT. NO.: SH92-6
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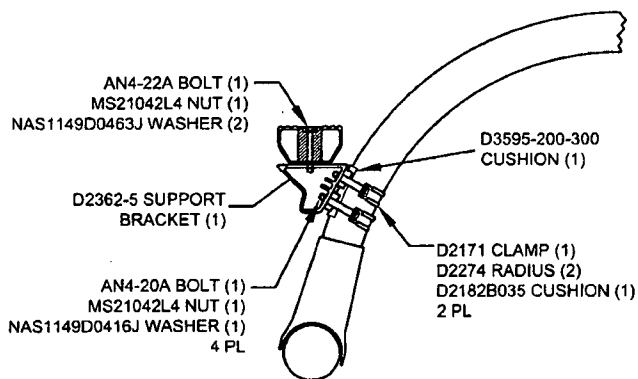
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MFG. APPR.	N/A	DSI 9525	SHEET 2 OF 4
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SECTION C-C: CENTER SUPPORT
(D350-591-111A ONLY)
(NOT TO SCALE)



SECTION D-D: AFT ATTACHMENT
(D350-591-111A/-113/-119 ONLY)
(NOT TO SCALE)



SECTION E-E: AFT ATTACHMENT
(D350-591-115 ONLY)
(NOT TO SCALE)

FIGURE 32-9: Crosstube Attachment
REF ICA-D350-591

FIGURE 9: Crosstube Attachment
REF D350-591

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DATE: 10.06.08
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DRAWN	<i>[Signature]</i>		
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MFG. APPR.	N/A	DSI 9525	SHEET 3 OF 4
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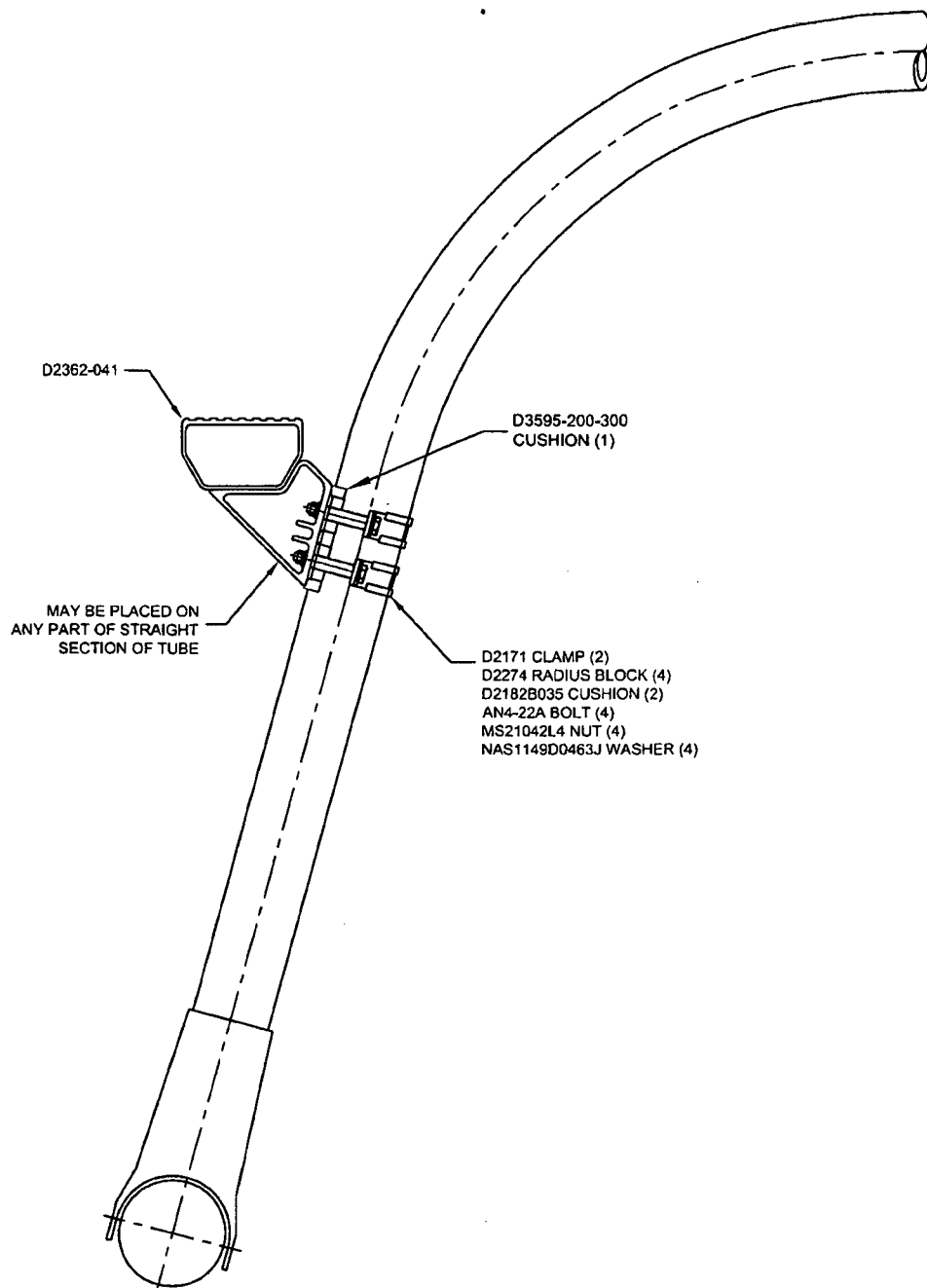


FIGURE 32-10: D350-591-117A Heli-Access-Step™, Pre-Flight Step
REF ICA-D350-591

FIGURE 10: D350-591-117A Heli-Access-Step™, Pre-Flight Step
REF D350-591

CANADA
DEPARTMENT OF TRANSPORT
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BRANCH
DAO # 01-O-01

APPROVED
BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 10.06.08
CERT. NO.: SH92-6
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DRAWN	<i>[Signature]</i>		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9525	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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